

# ONLINE ATTENTION OF SCHOLARLY PAPERS ON PSYCHOSOCIAL HAZARDS – Job Stress, Bullying and Burnout

The main aim of this study was to examine if scholarly papers on psychosocial risks provide altmetric indicators and to check if citations of papers written by Polish and Italian scholars correlate with Mendeley readers and Twitter mentions. The publications in question are indexed in the Web of Science and Scopus and have a sizeable representation within the field of Occupational Safety and Health (OSH), including psychosocial hazards. There are institutes responsible for conducting research on OSH issues in either of the countries. In Italy, it is the National Institute for Prevention and Safety at Work, whereas in Poland the counterpart institution is the Central Institute for Labour Protection – National Research Institute.

## Research questions

- RQ1. Do Polish and Italian scientific articles in the field of psychosocial risks have altmetric indicators?
- RQ2 Which altmetric indicators are most common?
- RQ3 What are the average numbers of altmetrics per paper?
- RQ4 Do citation counts of articles correlate with Twitter mentions and Mendeley readers?

## Methods

The study was divided into two stages. Stage 1 was to collect and filter the data obtained from the Scopus database. The metrics data collected from Scopus were related to the authors affiliated to Polish and Italian scientific institutions, included the keywords in the field of psychosocial hazards, and were limited to articles only (a simple search in Scopus “keywords”: bullying, burnout, job stress and “affiliation country”: Poland and Italy). The chronological scope of the study covered the years 2013-2018. Citation counts were collected for all papers. Only articles that were assigned a DOI were analysed (N Italy=594, N Poland=241). The other stage of the study involved the use of the Altmetric Explorer (<http://www.altmetric.com>), which provided the present authors with altmetric indicators (Robinson-García, Torres-Salinas, Zahedi, & Costas, 2014). The data were collected on March 2019.

## Results

1. The articles collected 21,826 altmetric indicators. The highest number of altmetrics was provided by Mendeley and Twitter, both for Italian and Polish papers.

Table 1. Altmetrics of Italian / Polish scholarly papers

Keyword	Number of papers with DOIs		Number of papers with altmetrics		Number of altmetric indicators	
	N		N		N	
	IT	PL	IT	PL	IT	PL
Bullying	160	29	117	24	6226	1515
Burnout	196	107	84	28	5088	1416
Job stress	238	105	119	37	5537	2044
Total	594	241	320	88	16851	4975

2. The average number of altmetric indicators per article was the highest for an article in Polish and was 151 (bullying paper). The highest average number of altmetrics for the Italian papers was 99 (bullying paper). The lowest average numbers of indicators were 17 for works in Polish (burnout paper) and 23 for the Italian papers (burnout paper), respectively.



Figure 1. Average number of altmetrics per paper

3. The results show a significant positive correlation between Mendeley readers and citation counts for both Italian and Polish articles. However, the correlation between Twitter and citation counts is statistically insignificant.

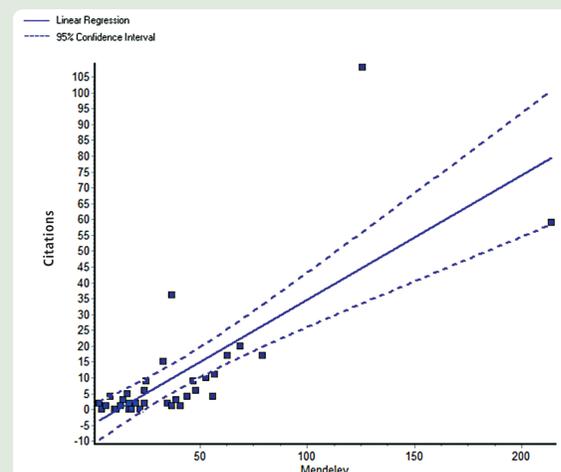


Figure 2. Poland: job stress Citations are significantly dependent on Mendeley readers. Linear regression:  $R^2 = 58,02\%$ ,  $p < 0,0001$ ,  $y = -4.734 + 0.394x$ ,  $n = 36$

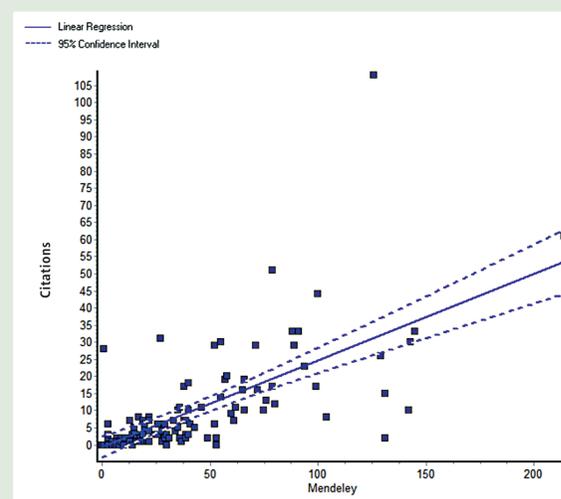


Figure 3. Italy: job stress Citations are significantly dependent on Mendeley readers. Linear regression:  $R^2 = 44,27\%$ ,  $p < 0,0001$ ,  $y = -0.638 + 0.253x$ ,  $n = 114$

## Conclusions

36% of scholarly papers on psychosocial risks written by Polish scholars had altmetric indicators, whereas in the group of Italian papers 54% of them had such indicators. Citation counts of articles published by Italian as well as Polish authors correlated significantly with Mendeley readers. Correlation with Twitter mentions was insignificant.

## Limitations

An important limitation of this paper is that in the study we chose arbitrarily only three keywords related to psychosocial hazards, even though a number of various terms are used to describe repeated and long-term negative treatment at work. It should be emphasised, that the purpose of this article is to show the tendency to non-traditional reach of articles, therefore, it was not that important to analyse all possible terms.